



## Hunters of the Ice Age: The biology of Upper Paleolithic people

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### Abstract:

The Upper Paleolithic represents both the phase during which anatomically modern humans appeared and the climax of hunter-gatherer cultures. Demographic expansion into new areas that took place during this period and the diffusion of burial practices resulted in an unprecedented number of well-preserved human remains. This skeletal record, dovetailed with archeological, environmental, and chronological contexts, allows testing of hypotheses regarding biological processes at the population level. In this article, we review key studies about the biology of Upper Paleolithic populations based primarily on European samples, but integrating information from other areas of the Old World whenever possible. Data about cranial morphology, skeletal robusticity, stature, body proportions, health status, diet, physical activity, and genetics are evaluated in Late Pleistocene climatic and cultural contexts. Various lines of evidence delineate the Last Glacial Maximum (LGM) as a critical phase in the biological and cultural evolution of Upper Paleolithic populations. The LGM, a long phase of climatic deterioration culminating around 20,000 BP, had a profound impact on the environment, lifestyle, and behavior of human groups. Some of these effects are recorded in aspects of skeletal biology of these populations. Groups living before and after the LGM, Early Upper Paleolithic (EUP) and Late Upper Paleolithic (LUP), respectively, differ significantly in craniofacial dimensions, stature, robusticity, and body proportions. While paleopathological and stable isotope data suggest good health status throughout the Upper Paleolithic, some stress indicators point to a slight decline in quality of life in LUP populations. The intriguing and unexpected incidence of individuals affected by congenital disorders probably indicates selective burial practices for these abnormal individuals. While some of the changes observed can be explained through models of biocultural or environmental adaptation (e.g., decreased lower limb robusticity following decreased mobility; changes in body proportions along with climatic change), others are more difficult to explain. For instance, craniodental and upper limb robusticity show complex evolutionary patterns that do not always correspond to expectations. In addition, the marked decline in stature and the mosaic nature of change in body proportions still await clarifications. These issues, as well as systematic analysis of specific pathologies and possible relationships between genetic lineages, population movements and cultural complexes, should be among the goals of future research.

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### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Security, Precipitation, Temperature

# Climate Change and Human Health Literature Portal

**Food/Water Security:** Agricultural Productivity

**Temperature:** Fluctuations

**Geographic Feature:** 

resource focuses on specific type of geography

General Geographical Feature

**Geographic Location:** 

resource focuses on specific location

Global or Unspecified

**Health Impact:** 

specification of health effect or disease related to climate change exposure

Developmental Effect

**Developmental Effect:** Other Functional Deficit

**Resource Type:** 

format or standard characteristic of resource

Research Article, Research Article

**Resilience:** 

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

**Timescale:** 

time period studied

Historical